

Planning for Storm Water in Your Master Plan

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Seven Exciting Topics

- What Is Planning?
- Why Plan?
- Types of Plans
- What Is Planned?
- Why Storm Water is Different
- Avoiding Legal Trouble
- Storm Water's Limits
- Hopes and Challenges

What is Planning?

- Assembling and analyzing existing and future conditions in order to identify those facilities and processes that will be needed in order to maintain and/or improve the existing level of service in areas of existing as well as proposed development.
- Planning also involves the preparation of an implementation schedule, and the identification of funding and procedural requirements.

Why Plan?

- To figure out who may have screwed up
- To figure out who may be about to screw up in the future
- To figure out how to fix all these screw-ups – present and future;
- To figure out who's going to pay for everything;
- To set up appropriate design and maintenance criteria and procedures;

Three Types of Plans

- The “Ghost” Plan – People are afraid of it, but no one has ever seen it;
- The “Mummy” Plan – It was all wrapped up a long time ago, buried somewhere, and then forgotten;
- The “Dracula” Plan – It may be a pain in the neck, but at least it keeps things flowing...
- “A live dog is better than a dead lion...”

Plan What?

Types of Master Plans

- Transportation
- Water
- Sewer
- Solid Waste
- Parks
- Open Space
- Green Space
- Education

Storm Water is Different

- The demand for all other services either steadily increases, or increases according to daily and/or annual cycles
- Storm water demand is random
 - High peaks of demand after floods
 - Profound apathy at other periods

Avoiding Legal Trouble

- **Statutory Requirements for Storm Water**
 - **National Flood Insurance Program (FEMA)**
 - First Legislation 1968 (Amended 1969)
 - Major Legislation 1973
 - Program Revisions 1994
 - **National Pollutant Discharge Elimination System**
 - Instituted by Clean Water Act (1970)
 - Directed by Water Quality Act Amendments of 1986
 - Phase I Permit Requirements Applicable Since 1992
 - Phase II Permit Requirements Applicable Since 2003

Storm Water Master Planning: Old Constraints and New Possibilities

- Funding – The World's Oldest Constraint
- Technology – The World's Newest List of Possibilities
 - New Data Collection Methods
 - Database and Mapping Technologies
 - Communications Technologies (i.e., the Internet)

Storm Water Hopes and Challenges

- Making the Engineered System Imitate Nature
- Extend the Plan Upstream

Get Started Planning!

